

REMARKS

Favorable reconsideration of this application is respectfully requested in view of the following remarks.

Claims 1, 3-10, 12-18 and 48-73 are pending in this application. Claims 1, 10, 48, 52, 58, 63 and 72 are independent. By this Amendment, Claims 1, 10, 48, 52, 58, 63 and 72 are amended to clarify the recited features, and Claim 73 is added. Support for Claim 73 can be found, for example, on page 18, lines 27-31 of the application. No new matter is added.

The Official Action rejects independent Claims 1, 10, 48, 52, 58 and 72 under 35 U.S.C. §103(a) in view of International Application Publication No. WO 01/71848 A1 to Atherton and U.S. Patent No. 6,181,287 to Beigel. The rejection is respectfully traversed.

Independent Claim 1 defines an RFID tag including, *inter alia*, a substrate, a first electrically conductive region associated with the top surface of the substrate, so as to be disposed above the top surface of the substrate, a second electrically conductive region associated with the bottom surface of the substrate, so as to be disposed below the bottom surface of the substrate, and electrically coupled to the first conductive region via non-contact coupling, and an adhesion modifying layer modifying adhesion of the second conductive region such that the second conductive region is disrupted if the tag is tampered or removed from the receiving surface. The first and second conductive regions form an RFID antenna.

Atherton's label 1000 has a tamper track 1005 ("first electrically conductive region") electrically coupled to the antenna 1003 ("second electrically conductive region") via electrical through connects 1004 as shown in Fig. 10B of the reference. Because of the electrical through connects 1004, the Official Action acknowledges

that the tamper track 1005 is not electrically coupled to the antenna 1003 ("second electrically conductive region") via *non-contact* coupling as defined in independent Claim 1.

The Official Action states that Beigel discloses a non-contact coupling for an RFID circuit based on the illustration in Figs. 1-3 of Beigel. Here, Beigel illustrates an integrated circuit chip 10, including terminal areas 17, mounted on one side of a substrate 12, and an antenna element 14 mounted on the opposing side of the substrate 12. According to Beigel, the integrated circuit chip 10 and the antenna element 14 are electrically coupled via the capacitive coupling 19 shown in Fig. 3 of the patent. The Official Action takes the position that it would have been obvious to modify Atherton's label 1000 to electrically couple the tamper track 1005 to the chip 1002 and the antenna 1003 via a non-contact coupling in view of Beigel's disclosure.

However, one skilled in the art would not have looked to Beigel's device to modify Atherton's RFID tamper label. Atherton's RFID tamper label 1000 is a tamper indicating device configured to protect the object from, *inter alia*, theft, product substitution, tampering, and warranty violation, as discussed in Atherton's Abstract and in lines 3-16 on page 1 of Atherton's disclosure. In this regard, the RFID tamper label 1000 is *adhesively attached* to an object. Atherton's tamper label 1000 indicates tampering of the object when disruption of the device's antenna is detected. Disruption of the antenna occurs when the electrical connection between the tamper track 1005 and the antenna 1003 is lost due to, for example, physical destruction of the tamper track 1005 when the RFID tamper label 1000 is removed from the adhesive attachment to the object. Accordingly, Atherton actively uses disruption to the antenna 1003 as a tamper evident indicator. Atherton is not interested in

preventing disruption to the antenna, but rather uses the disruption as an indicator that tampering has occurred.

On the other hand, Beigel is concerned with miniaturizing the components of the tag and reducing the cost thereof while maintaining a secure conductive connection of the integrated circuit with the antenna (see col. 1, lines 21, 22 and 36-40 of Beigel). That is, Beigel seeks to provide a compact, low cost integrated circuit tag with a *secure conductive connection* of the integrated circuit with the antenna. There is no discussion in Beigel of attaching the integrated circuit/tag to a surface of an object by means of an adhesive for indicated that tampering has occurred. Nor is there any consideration given to disrupting a conductive region of the integrated circuit. Thus, Beigel is not concerned with using antenna damage as a tamper evident indicator like in Atherton, but rather seeks to prevent antenna damage. Therefore, one skilled in the art would not have looked to Beigel's device to modify Atherton's RFID tamper label.

In view of the above, one skilled in the art would not have found Beigel's integrated circuit particularly relevant to Atherton's tamper label. Accordingly, the combination of Atherton and Beigel would not have rendered obvious an RFID tag having, together with the other claimed features, *non-contact* coupled first and second conductive regions forming an RFID antenna. Therefore, independent Claim 1 is patentable over the combination of Atherton and Beigel for at least the above reasons.

Independent Claims 10, 48, 52, 58 and 72 each define RFID tags including a non-contact coupling, and thus are patentable over Atherton and Beigel for at least the reasons discussed above.

The Official Action rejects independent Claim 63 under 35 U.S.C. §103(a) in view of Atherton and Beigel, and further in view of U.S. Patent No. 6,859,745 to Carr et al. ("Carr"). The rejection is respectfully traversed.

Independent Claim 63 recites a combination comprising an RFID tag including, *inter alia*, a substrate, an electrically conductive region disposed on the bottom surface of the substrate, so as to be disposed below the bottom surface, and an RFID integrated circuit disposed on the top surface of the substrate and electrically coupled to the electrically conductive region via non-contact coupling.

As discussed above, one skilled in the art would not have looked to Beigel's integrated circuit to modify Atherton's RFID tamper label 1000 to have the claimed non-contact coupling. In addition, Carr fails to overcome the deficiencies of Atherton and Beigel. Thus, independent Claim 63 is patentable over the applied references for at least these reasons.

Dependent Claims 3-9, 12-18 and 49-51, 53-57, 59-62 and 64-71 are patentable over the applied references at least by virtue of their respective dependence from the patentable independent claims. Thus, a detailed discussion of the additional distinguishing features recited in these dependent claims is not set forth at this time.

Withdrawal of the rejections is respectfully requested.

Independent Claim 73 is presented for consideration and recites that the RFID tag further includes a coupling circuit that facilitates electrical non-contact coupling of the integrated circuit with the antenna.

Atherton, Beigel and Carr fail to disclose such a coupling circuit. Thus, Claim 72 is patentable over the applied references for at least this reason, as well as by virtue of its dependence from the patentable independent Claim 1.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

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